**Approach:**

1. Traverse the original list while creating a new list with the help of values of original list
2. Let random ptrs be Null initially
3. For every new node created in the new list map it to existing node in the original list
4. Traverse the list again to set the random pointers

**CODE:**

dummy = newList = Node(-1)

temp = head

hashMap = {}

while temp:

# create new node

newNode = Node(temp.val)

# attach new node to new list

newList.next = newNode

# Map new node of new list to equivalent node in orginal list

hashMap[temp] = newNode

# Move to next node in both original and new list

temp = temp.next

newList = newList.next

# attaching random pointers

newList = dummy.next

temp = head

while temp:

if temp.random:

newList.random = hashMap[temp.random]

else:

newList.random = None

# Move to next node in both original and new list

temp = temp.next

newList = newList.next

return dummy.next